REMARKS

Reconsideration of the above-identified application in view of the preceding amendments and the following remarks is respectfully requested.

Claims 1-4, 6-23 and 25-50 are pending in this application. Claims 40-45 have been withdrawn from consideration as being directed to non-elected subject matter. Claims 5 and 24 have been cancelled without prejudice. By way of this amendment Claims 1, 6, 11, 19, 20, 25, 30, 38, 46, and 48-50 have been amended to more particularly point out and define the subject matter regarded as inventive. No new matter has been added to the subject application by these amendments nor have any new issues been raised. Support for the amendments is found throughout the written description and drawings of the subject application.

Information Disclosure Statement

In the Office Action, the Examiner noted that an Information Disclosure Statement filed October 27, 2002 was non-compliant. Applicants' representative is reviewing this matter and will contact the Examiner to discuss an appropriate course of action at a later date.

Claim Objections

Also in the Office Action, an objection was raised with respect to Claims 11 and 30. Appropriate amendments have been made to overcome these objections and withdrawal thereof is respectfully requested.

Claim Rejections – 35 U.S.C. §102

Claims 1-8, 12, 13, 15, 16, 18-27, 31, 32, 34, 35, 37-39 and 46-50 were rejected under 35 U.S.C. §102(b) over U.S. Patent No 5,860,967 to Zavislan et al.

Zavlasian et al. disclose a hand held microsurgical instrument for applying laser energy to a selected location in an area under the skin. The area is visualized through a video processing system while the laser beam is steered by a steering device 28. A controller and video processing unit designated by reference numeral 24 obtains signals from the beam steering device 28 and applies them to a beam deflection system utilizing mirrors and motors which step or steer the beam in X and Y directions. (See col. 4, lns. 32-34).

Zavlasian et al. do not disclose or suggest that the controller 24 functions to adjust one or more parameters of the laser beam, such as spot size or pulse width, as suggested by the Examiner in the Office Action at page 4. Instead, the controller 24 functions to position the laser beam at a desired location, so that it can be focused to a depth that will avoid damage to the tissue above the treatment site. Indeed, it is the "treating physician who can effect an increase in beam power or turn the beam on to treat the tissue in the selected locations," not the controller. (see Abstract)

In contrast, independent Claims 1 and 48, as currently amended, define methods of using a feedback control to non-invasively identify and locate one or more targets based on predetermined conditions for selective laser treatment. The claimed methods include, among others, the steps of determining a location and one or more characteristics for one or more targets based upon one or more reflections detected by a multi-dimensional photo-sensor and the predetermined conditions, selectively treating a target using a laser of a predetermined wavelength and a predetermined power in accordance with the determined location and the determined characteristic(s), and adjusting one or more parameters of the laser in real time in

accordance with the determined characteristic(s) of the target until treatment is complete. Zavlasian et al. do not disclose or suggest such a methodology.

More particularly, Zavlasian et al. do not disclose a treatment method that includes the step of adjusting laser parameters in real time, e.g., spot size, pulse width, wave length or power based on one or more determined characteristics of a target, e.g., the size, shape, color , contrast, brightness, pattern, structure or treatment status of the target, or the photometric, spectrometric or topological properties of the target. Accordingly, amended method Claims 1 and 48, and each of the claims depending respectively therefrom are not anticipated by Zavlasian et al.

Independent Claims 20 and 49, as currently amended, define an apparatus having a feedback control for non-invasively identifying and locating target(s) based on predetermined conditions for selective laser treatment. The apparatus include, among other things, means for determining a location and one or more characteristics for a target based upon one or more reflections detected by a multi-dimensional photo-sensor and the predetermined conditions, means for selectively treating a target using a laser of a predetermined wavelength and a predetermined power in accordance with the determined location and the determined characteristic(s) and means for adjusting parameters of the laser in real time in accordance with the determined characteristic(s) of the target until treatment is complete. Zavlasian et al. do not disclose or suggest such a structural arrangement. More particularly, Zavlasian et al. do not disclose a treatment apparatus that includes means for adjusting laser parameters in real time based on determined characteristics of a target. Accordingly, amended apparatus Claims 20 and 49, and each of the claims depending respectively therefrom are not anticipated by Zavlasian et al.

Independent Claim 39, as originally presented, defines a method of non-invasively identifying one or more subsurface targets for laser treatment at a tissue surface area, The method includes the steps of directing a plurality of polarized lights having respective predetermined wavelengths at the tissue surface area, detecting one or more reflections of each of the plurality of polarized lights, locating one or more untreated target subsurface tissue structures under the tissue surface area in accordance with at least one of respective intensities and polarizations of the detected reflections, extracting one or more points of the one or more untreated target subsurface tissue structures on the tissue surface area from the detected reflections in accordance with a line detection algorithm, and identifying the one or more subsurface targets by selecting from the one or more points. It is respectfully submitted that Zavlazian et al. do not disclose or suggest such a methodology. In particular, Zavlasian et al. do not disclose or suggest a method that includes the step of extracting one or more points of a subsurface tissue structure from detected reflections in accordance with a line detection algorithm. Accordingly, Claim 39, as originally presented, is not anticipated by Zavlasian et al.

Claim 46, as currently amended, define an apparatus for providing feedback control and for non-invasively identifying and locating one or more subsurface targets based on predetermined conditions for selective laser treatment at a tissue surface area. The apparatus includes, among other things, means for selectively treating a subsurface target using a laser of a predetermined wavelength and a predetermined power in accordance with received input data, wherein the input data is generated in accordance with a location and one or more characteristics of the subsurface target determined based upon outputted data on one or more reflections and the predetermined conditions, and means for adjusting one or more parameters of the laser in real

time in accordance with the characteristic(s) of the target until treatment is complete. Zavlasian et al. do not disclose or suggest such a structural arrangement. Accordingly, amended Claim 46 and the sole claim depending therefrom are not anticipated by Zavlasian et al.

Claim 50, as currently amended, defines an apparatus having feedback control for non-invasively identifying and locating one or more subsurface targets based on predetermined conditions for selective laser treatment at a tissue surface area. The apparatus includes, among other things, a computing device coupled to an illumination device and a light detection device, wherein the computing device is adapted to determine a location and one or more characteristics for a subsurface target based upon the reflection(s) detected by the photo-sensor and the predetermined conditions, and a laser device coupled to the computing device, wherein the laser device is adapted to selectively treat the target using a laser of a predetermined wavelength and a predetermined power in accordance with the determined location and the determined characteristic(s), and wherein the computing device modulates one or more parameters of the laser in real time in accordance with the determined characteristic(s) until treatment is complete. Zavlasian et al. do not disclose or suggest such a structural arrangement. Accordingly, amended Claim 50 is not anticipated by Zavlasian et al.

In sum, it is submitted that Claims 1-4, 6-8, 12, 13, 15, 16, 18-23, 25-27, 31, 32, 34, 35, 37-39 and 46-50 are patentable over U.S. Patent No 5,860,967 to Zavislan et al. and withdrawal of the rejection under 35 U.S.C. §102(b) is respectfully requested.

Also in the Office Action, Claims 9-11, 14, 17, 20, 28-30, 33, 36, 39, 46 and 48-50 were rejected under 35 U.S.C. §102(b) in view of U.S. Patent No. 5,071,417 to Sinofsky.

Sinofsky discloses an apparatus for joining biological materials including a laser for delivering a beam of radiation to an anastomotic site, a reflectance sensor for measuring the intensity of infrared light reflected from the site while illuminating the site by a light source, a monitor connected to the reflectance sensor for monitoring changes in the intensity of infrared light reflected from the site, analyzing means connected to the monitor to determine the degree of crosslinking or coagulation of the biological materials based upon the monitored changes and for generating a signal representative of the degree of crosslinking to determine when an optimal state of fusion has occurred, and control means connected to the analyzing means and laser for controlling the output of the laser in response to the crosslinking signal.

It is respectfully submitted that Sinofsky does not disclose or suggest the apparatus or method of the subject invention. In particular, Sinofsky fails to disclose or suggest an apparatus having a feedback control, for non-invasively identifying and locating one or more subsurface targets based on predetermined conditions for selective laser treatment at a tissue surface area, wherein the apparatus includes means for directing one of a polarized and an unpolarized light having a predetermined wavelength at the tissue surface area, means for detecting one or more reflections of the light using a multi-dimensional photo-sensor, means for determining a location and one or more characteristics for each target(s) based upon the reflection(s) detected by the photo-sensor and the predetermined conditions, wherein the predetermined conditions are defined at least in part by one of predetermined image analysis and mathematical algorithms, means for selectively treating the target(s) using a laser of a predetermined wavelength and a predetermined power in accordance with the determined location and the determined

characteristic(s) and means for adjusting one or more parameters of the laser in real time in accordance with the determined characteristic(s) until treatment is complete.

Therefore, it is submitted that Claims 9-11, 14, 17, 20, 28-30, 33, 36, 39, 46 and 48-50 are patentable over U.S. Patent No. 5,071,417 to Sinofsky and withdrawal of the rejection under 35 U.S.C. §102(b) is respectfully requested.

It is respectfully submitted that each of the claims now pending in this application, namely Claims 1-4, 6-23 and 25-50, are directed to patentable subject matter, and allowance thereof is earnestly solicited.

Respectfully submitted,

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